South African National Survey of Arachnida (SANSA): Solifugae (sun-spiders) of the national parks and reserves of South Africa (Arachnida, Solifugae)

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As part of the South African National Survey of Arachnida (SANSA) surveys are underway to determine the diversity of the Arachnida fauna of South Africa. One such a project is to make an inventory of the arachnids in protected areas. This paper reports on the present status of Solifugae in conserved areas. South Africa has a rich Solifugae fauna represented by 146 species. Of these species, 46 (31.5 %) represented by three families and 11 genera are presently protected in South African national parks, reserves or wilderness areas.

Key words: Arachnida, check list, national parks, Solifugae, South Africa, South African National Survey of Arachnida (SANSA).

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Introduction

As part of the South African National Survey of Arachnida (SANSA) inventories are underway to determine the diversity of the South African Arachnida fauna (Dippenaar-Schoeman & Craemer 2000). Several SANSA projects are in progress, including inventories of the arachnid faunas of protected areas. One such project is an inventory of the Solifugae (sun spiders) from protected areas. Meaning-ful conservation can not take place if the species involved are not known.

The Solifugae, an order of the Arachnida, are also known as sun-spiders, wind-scorpions, camel-spiders or romans. They are known from tropical, subtropical and arid environments in southern Europe, Africa, Asia and the Americas (Punzo 1998). A total of 1075 species from 12 families is presently known (Harvey 2003). South Africa has a rich fauna of sun-spiders, with 150 known species represented by six families (DippenaarSchoeman 2002). This represents about 14 % of the world's fauna. Of these species, 107 (74%) are endemic to South Africa (Dippenaar-Schoeman 2002). Little is still known about the conservation status of the sun-spiders in South Africa and no red list is available. In an ealier paper on the fauna of South Africa, Lawrence (1955) indicates that some species have very restricted and localised distributions. This was supported by Griffin (1990), who found that most sun-spiders appear to have very restricted ranges and may be habitat dependent. Thus, it is important not only to consider the conservation of the sun-spiders alone, but also of their habitats, particularly in the case of locally distributed species.

The first inventory of Solifugae in a protected area was made by Lawrence (1964a, 1964b), who recorded 18 species from the Kruger National Park. Lamoral (1973) reported on six species known from the Kalahari Gemsbok National Park (now Kgalagadi Trans-

Table 1 List of Solifugae species recorded from protected areas in South Africa.

National Parks

Richtersveld National Park Augrabies National Park Biton (Biton) cataractus Lawrence, 1968 1972* Blossia orangica (Lawrence, 1935a)* Blossia rosea (Lawrence, 1935a)* Hexisopus reticulatus Purcell, 1902* Kgalagadi Transfrontier Park Biton (Biton) longisetosus Lawrence, 1972* Biton (Biton) schultzei (Kraepelin, 1908) Biton (Biton) tenuifalcis Lawrence, 1962 Blossia pallideflava (Lawrence, 1972)* Blossia rosea (Lawrence, 1935a)* Chelypus barberi Purcell, 1902 Chelvpus hirsti Hewitt, 1915 Chelypus lennoxae Hewitt, 1912 Kruger National Park Biton (Biton) transvaalensis Lawrence, 1949* Blossia laticosta Hewitt, 1919 Blossia singularis (Lawrence, 1965)* Hemiblossia bouvieri Kraepelin, 1899 Solpuga conservatum (Lawrence, 1964)* Solpuga truncata (Lawrence, 1968)* Solpugema krugeri Lawrence, 1964c* Solpugiba arenicola Lawrence, 1964a Zeria celeripes (Hirst, 1911) Zeria monteiri (Pocock, 1895) Zeria sericea (Pocock, 1897) Zeria serraticornis (Purcell, 1899) Zeria spiralicornis (Purcell, 1903) Zeria strepsiceros nocturna (Lawrence, 1965)* Zeriassa furcicornis Lawrence, 1929* Zeriassa purcelli Hewitt, 1914 Zeriassa transvaalensis Lawrence, 1964b* Zeriassa tuxeni Lawrence, 1965

Biton (Biton) adamanteus polytricha Lawrence, Biton (Biton) tenuifalcis Lawrence, 1962 Blossia clunigera Kraepelin, 1908* Blossia namaquensis Purcell, 1902* Solpugema genucornis (Lawrence, 1935b)* Table Mountain National Park Blossia litoralis Purcell, 1903a* Solpuga villosa Purcell, 1899* Solpugema vincta (C.L.Koch, 1842)* Zeria fusca (C.L. Koch, 1842)* Zeria schoenlandi (Pocock, 1900)

Other Protected Areas

Hluhluwe Game Reserve Solpuga suffusca Hewitt, 1916 Swartberg Nature Reserve Solpugema brachyceras (Lawrence, 1931)* Solpugema cvcloceras (Lawrence, 1931)* Grootvadersbosch Wilderness Area Solpugema phylloceras (Lawrence, 1929)* Cedarberg Wilderness Area Solpuguna cervina (Purcell, 1899)* Great Winterhoek Wilderness Area Zeria antelopicornis (Lawrence, 1929)* Blyde River Nature Reserve Zeria carli (Roewer, 1933)*

* South African endemic

frontier Park) and four from the Augrabies National Park

Solifugae are more common in warm and arid regions, and twice as many species are found in the western half of South Africa than in the east, with the highest numbers recorded from the Northern Cape Province (Wharton 1981; Dippenaar-Schoeman 2002). Most sunspiders appear to have very restricted ranges and may be habitat dependent (Dean & Griffin 1993; Griffin 1990).

The sun-spiders are solitary animals with a strong antisocial nature. They live in retreats scraped out under rocks and logs. They use their chelicerae to loosen the soil and use their front body and legs to move large amounts of soil around. These retreats are used for resting, ecdysis and the deposition of eggs. They will defend themselves voraciously against their enemies. Because of a lack of venom they use speed and their strong chelicerae to attack. They prey on insects, other arachnids and even reptiles like geckos and lizards.

 Table 2

 A check list of Solifugae from protected areas in South Africa.

 An * following a species name indicates a South African endemic

I. Family Daesiidae Kraepelin, 1899

i. Genus Biton Karsch, 1880

- Biton (Biton) adamanteus polytricha Lawrence, 1972* Lawrence, 1972: 107; Harvey, 2003: 219. Type locality: 1.25 km E of Swartpoort (Swartport), Richtersveld, Northern Cape Province. Park/reserve: Richtersveld National Park. Distribution: South Africa.
- Biton (Biton) cataractus Lawrence, 1968
 Lawrence, 1968: 59; Wharton, 1981: 16; Harvey, 2003: 222. Type locality: Augrabies Falls, Northern Cape Province. Park/reserve: Augrabies National Park. Distribution: South Africa, Namibia.
- Biton (Biton) longisetosus Lawrence, 1972*
 Lawrence, 1972: 106; Wharton, 1981: 18; Harvey, 2003: 220.
 Type locality: Twee Rivieren, Kalahari Gemsbok National Park (now Kgalagadi Transfrontier Park), Northern Cape Province.
 Park/reserve: Kgalagadi Transfrontier Park.
 Distribution: South Africa.
- 4. Biton (Biton) schultzei (Kraepelin, 1908) Kraepelin, 1908: 274 (from Daesia); Hewitt, 1919: 54; Lawrence, 1955: 186; 1959: 378; Wharton, 1981: 18; Harvey, 2003: 224. Type locality: Khakhea, Botswana. Park/reserve: Kgalagadi Transfrontier Park. Distribution: Botswana, South Africa.
- Biton (Biton) tenuifalcis Lawrence, 1962
 Lawrence, 1962: 197; Wharton, 1981: 19; Harvey, 2003: 225.
 Type locality: Twee Rivieren, Kalahari Gemsbok National Park (now Kgalagadi Transfrontier Park), Northern Cape.
 Park/reserve: Kgalagadi Transfrontier Park, Richtersveld National Park.
 Distribution: Namibia, South Africa.
- 6. Biton (Biton) transvaalensis Lawrence, 1949*
 Lawrence, 1949: 204; 1955: 186; 1964b: 34; 1967: 83; Harvey, 2003: 225.
 Type locality: Great Salt Pan, Waterpoort, Soutpansberg district, Limpopo Province.
 Park/reserve: Kruger National Park (Letaba, Shingwedzi, Mahlakuza Pan).
 Distribution: South Africa.

ii. Genus Blossia Simon, 1880

- 1. Blossia clunigera Kraepelin, 1908*
 - Kraepelin, 1908: 275; Hewitt, 1919a: 59; Lawrence, 1955: 179; Wharton, 1981: 25; Harvey, 2003: 213. Type locality: Steinkopf, Northern Cape Province. Park/reserve: Richtersveld National Park (Wharton, 1981). Distribution: South Africa.
- 2. Blossia laticosta Hewitt, 1919
 - Hewitt, 1919: 64, 59; Lawrence, 1964b: 34; 1955: 181; 1967: 83; Harvey, 2003: 216.
 Type locality: Blauwkop, Soutpansberg District, Limpopo Province.
 Park/reserve: Kruger National Park (Mahlakuza Pan, Orpen Camp, Pumbe, Punda Milia Rest Camp, Malelane Rest Camp, Pafuri, Krokodil Bridge).
 Distribution: South Africa, Israel, Somalia?

3. Blossia litoralis Purcell, 1903* Purcell, 1903a: 4; Hewitt, 1919: 57; Lawrence, 1955: 156; 1962: 201; Harvey, 2003: 216. Type locality: Duikerklip near Houtbay, Western Cape Province. Park/reserve: Table Mountain National Park. Distribution: South Africa. 4. Blossia namaguensis Purcell, 1902* Purcell, 1902; 221; Hewitt, 1919; 56; Lawrence, 1955; 181; Wharton, 1981; 27; Harvey, 2003; 216. Type locality: Steinkopf, Northern Cape Province. Parks/reserves: Wharton (1981) recorded it from border of Richtersveld National Park at 28°19'S; 16°58'E. Distribution: Namibia, South Africa. 5. Blossia orangica (Lawrence, 1935)* Lawrence, 1935a: 78 (from Blossiola); 1955: 182; Wharton, 1981: 27; Harvey, 2003: 217. Type locality: Augrabies Falls, Northern Cape Province. Parks/reserves: Augrabies National Park. Distribution: South Africa. 6. Blossia pallideflava (Lawrence, 1972)* Lawrence, 1972: 99 (from Blossiola); Wharton, 1981: 27; Harvey, 2003: 217. Type locality: Twee Rivieren, Kalahari Gemsbok National Park, Northern Cape Province. Parks/reserves: Kgalagadi Transfrontier Park. Distribution: South Africa. 7. Blossia rosea (Lawrence, 1935)* Lawrence, 1935a: 76 (from *Blossiola*); 1955: 182; Wharton, 1981: 31; Harvey, 2003: 218. Type locality: Augrabies Falls, Northern Cape Province. Parks/reserves: Augrabies National Park; Kgalagadi Transfrontier Park (Twee Rivieren). Distribution: South Africa. 8. Blossia singularis (Lawrence, 1965)* Lawrence, 1965: 55 (from Blossiola); Harvey, 2003: 218. Type locality: Kruger National Park (Shipale, Punda Maria area) Limpopo Province. Parks/reserves: Kruger National Park. Distribution: South Africa. iii. Genus Hemiblossia Kraepelin, 1899 1. Hemiblossia bouvieri Kraepelin, 1899 Kraepelin, 1899: 233; Hewitt, 1919: 61; Lawrence, 1953: 959; 1955: 155; 1964b: 34; 1965: 68; Wharton, 1981: 36; Harvey, 2003: 232. Type locality: Upper Zambezi River, Zambia? Parks/reserves: Kruger National Park (Hapi Dam, Pafuri). Distribution: Angola, Kenya, Namibia, South Africa, Zambia, Zimbabwe. II. Family Hexisopodidae Pocock, 1879 i. Genus Chelypus Purcell, 1902

1. Chelypus barberi Purcell, 1902

Purcell, 1902: 224; Hewitt, 1919: 70; Lawrence, 1955: 173; 1959: 378; Lamoral, 1973: 91; Wharton, 1981: 46; Harvey, 2003: 280.
Type locality: Zandkuil, Northern Cape Province.
Parks/reserves: Kgalagadi Transfrontier Park (Mata Mata, Twee Rivieren).
Distributions de Dataman Shanihar Zinde Leng Sarth A fring.

Distribution: Angola, Botswana, Namibia, Zimbabwe, South Africa.

Chelypus hirsti Hewitt, 1915
 Hewitt, 1915: 323; 1919: 70; Lawrence, 1955: 173; 1963: 15; Lamoral, 1973: 90; Wharton, 1981: 46; Harvey, 2003: 281.

 Type locality: Rietfontein, Northern Cape Province.
 Parks/reserves: Kgalagadi Transfrontier Park (Twee Rivieren).
 Distribution: Botswana, Namibia, South Africa.

3. Chelypus lennoxae Hewitt, 1912 Hewitt, 1912: 312; 1919: 70; Lawrence, 1955: 173; Lamoral, 1973: 90; Wharton, 1981: 46; Harvey, 2003: 281. Type locality: Upington, Northern Cape Province. Parks/reserves: Kgalagadi Transfrontier Park. Distribution: Namibia, South Africa.

ii. Genus Hexisopus Karsch, 1879

1. Hexisopus reticulatus Purcell, 1902* Purcell, 1902: 222; Hewitt, 1919: 69; Lawrence, 1955: 172; Wharton, 1981: 52; Harvey, 2003: 283.

Purcen, 1902. 222, Hewitt, 1919. 69, Lawrence, 1955. 172, Whatton, 1981. 52, Harvey, 2005. 285.
Type locality: Between Bysteek and Great Falls at Augrabies, Northern Cape Province.
Parks/reserves: Augrabies National Park.
Distribution: South Africa.

III. Family Solpugidae Leach, 1816

i. Genus Solpuga Lichtenstein, 1796

1. Solpuga conservatum (Lawrence, 1964)*

Lawrence, 1964a: 529 (from *Solpugopa*); 1964b: 33; 1967; 38; Harvey, 2003: 307. Type locality: between Saselandonga Poort and Mahlakuza Pan on eastern boundary, Kruger National Park. Parks/reserves: Kruger National Park (between Saselandonga Poort and Mahlakuza Pan, between

Mahlakuza and Malanga, Shangoni Koppies, Mwanedzi Dam, Skukuza). Distribution: South Africa.

2. Solpuga suffusca Hewitt, 1916

Hewitt, 1916: 217; 1919: 32; Lawrence, 1955: 195; Harvey, 2003: 308. Type locality: Hluhluwe Game Reserve, KwaZulu-Natal. Parks/reserves: Hluhluwe Game Reserve. Distribution: South Africa.

3. Solpuga truncata (Lawrence, 1968)*

Lawrence, 1968: 53 (from *Solpugopa*); Harvey, 2003: 309. Type locality: between Shalungwa and Maseya, Kruger National Park. Parks/reserves: Kruger National Park. Distribution: South Africa.

4. Solpuga villosa Purcell, 1899*
Purcell, 1899: 422; Hewitt, 1919a: 41; Lawrence, 1955: 201; Harvey, 2003: 309. Type locality: No exact locality only labelled "S.Africa".
Parks/reserves: Tafelberg National Park.
Distribution: South Africa.

ii. Genus Solpugema Roewer, 1933

 Solpugema brachyceras (Lawrence, 1931)* Lawrence, 1931: 132 (from Solpuga); 1955: 197; Harvey, 2003: 311. Type locality: Swartberg Pass, near Oudtshoorn, Western Cape Province. Parks/reserves: Swartberg Nature Reserve. Distribution: South Africa.

 Solpugema cycloceras (Lawrence, 1931)* Lawrence, 1931: 131 (from Solpuga); 1955: 198; Harvey, 2003: 311. Type locality: Swartberg Pass, near Oudtshoorn, Western Cape Province. Parks/reserves: Swartberg Nature Reserve. Distribution: South Africa. 	
 Solpugema genucornis (Lawrence, 1935)* Lawrence, 1935b: 505 (from Solpuga); 1955: 198; Wharton, 1981: 81; Harvey, 2003: 311. Type locality: Lekkersing, Richtersveld, Northern Cape Province. Parks/reserves: Richtersveld National Park. Distribution: Namibia, South Africa. 	
 Solpugema krugeri Lawrence, 1964* Lawrence, 1964c: 355; 1964b: 33; Harvey, 2003: 313. Type locality: Banks of Sabie River, Kruger National Park. Parks/reserves: Kruger National Park. Distribution: South Africa. 	
 Solpugema phylloceras (Lawrence, 1929)* Lawrence, 1929: 164; 1955; 200; Harvey, 2003: 313. Type locality: Pocaltsdorp near George, Western Cape Province. Parks/reserves: Grootvadersbosch Wilderness Area. Distribution: South Africa. 	
 6. Solpugema vincta (C.L.Koch, 1842)* C.L. Koch, 1842: 352 (as Solpuga); Hewitt, 1919: 33; Lawrence, 1929: 178; 1955: 200; Harvey, 2003: 314. Type locality: no exact locality only "Cap". Parks/reserves: Table Mountain National Park. Distribution: South Africa. 	
iii. Genus Solpugiba Roewer, 1934	
 Solpugiba arenicola Lawrence, 1964 Lawrence, 1964a: 1964b: 33; 1967: 84; Harvey, 2003: 314. Type locality: Between Shalungwa and Maseya, Kruger National Park. Parks/reserves: Kruger National Park (Sandveld between Shalungwa and Maseya, 1 km S of Tambye Drift near Pafuri, Skukuza Rest Camp, Isweni near Satara). Distribution: South Africa. 	
iv. Genus Solpuguna Roewer, 1933	
 1 Solpuguna cervina (Purcell, 1899)* Purcell, 1899: 415; Hewitt, 1919: 32; Lawrence, 1964a: 531; 1964b; Wharton, 1981: 75; Harvey, 2003: 316. Type locality: Clanwilliam, Western Cape Province. Parks/reserves: Cedarberg Wilderness Area. Distribution: South Africa. 	
v. Genus Zeria Simon, 1879	
 Zeria antelopicornis (Lawrence, 1929)* Lawrence, 1929: 153 (from Solpuga); 1955: 191; Harvey, 2003: 317. Type locality: Great Winterhoek Mountains, Western Cape Province. Parks/reserves: Great Winterhoek Wilderness Area. Distribution: South Africa. 	
 Zeria carli (Roewer, 1933)* Roewer, 1933: 461 (from Solpuga); Lawrence, 1955: 192; Harvey, 2003: 318. Type locality: near Johannesburg, Gauteng Province. 	

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Parks/reserves: Blyde River Nature Reserve. Distribution: South Africa.

3. Zeria celeripes (Hirst, 1911) Hirst, 1911: 10 (from Solpuga); Hewitt, 1919: 31; Lawrence, 1929: 178; 1955: 192; 1964b: 34; 1965: 49; 1967: 82; Harvey, 2003: 318. Type locality: Harare, Zimbabwe. Parks/reserves: Kruger National Park (Tswiriridam, Nwanetsani Dam, Saselandonga Poort, Mahlakuza Pan, Pretoriuskop, Tshokwane, Pumbe Picket) Distribution: Zimbabwe. South Africa.

4. Zeria fusca (C.L. Koch, 1842)*
C.L. Koch, 1842: 352 (from Solpuga); Hewitt, 1919: 26; Lawrence, 1929: 179; 1955: 166; Harvey, 2003: 319.
Type locality: "Cap" no exact locality.
Parks/reserves: Table Mountain National Park.
Distribution: South Africa.

- 5. Zeria monteiri (Pocock, 1895)
 Pocock, 1895: 87 (from Solpuga); Hewitt, 1919: 27; 1935: 476; Lawrence, 1928: 262; 1929: 178; 1949: 208; 1953: 969; 1955; 193; 1964b: 33; 1967: 83.
 Type locality: Maputo, Mozambique.
 Parks/reserves: Kruger National Park (Letaba Camp, Shingwedzi, Skukuza).
 Distribution: Angola, Botswana, Mozambique, Namibia, Zimbabwe, South Africa.
- 6. Zeria schoenlandi (Pocock, 1900)

Pocock, 1900: 316 (as *Solpuga*); Hewitt, 1919: 29; Lawrence, 1955: 194; Wharton, 1981: 78; Harvey, 2003: 323. Type locality: Grahamstown, Eastern Cape Province.

Parks/reserves: Table Mountain National Park.

Distribution: South Africa, Zimbabwe.

7. Zeria sericea (Pocock, 1897)

Pocock, 1897: 260 (from *Solpuga*); Lawrence, 1955: 194; 1964b: 33; 1967: 83; Wharton, 1981: 78; Harvey, 2003: 323. Type locality: Gadzema, Zimbabwe. Parks/reserves: Kruger Nacional Park (Punda Milia area, Shilowane, Madziringwe Poort, Saselandonga Poort, Sandveld, Sabie Hoek).

Distribution: Zimbabwe, Democratic Republic of the Congo, South Africa.

Zeria serraticornis (Purcell, 1899)
 Purcell, 1899: 409 (from Solpuga); Lawrence, 1955: 194; 1967: 83; Harvey, 2003: 323.
 Type locality: Bulawayo, Zimbabwe.
 Parks/reserves: Kruger National Park (Msimbit Forest, eastern boundary of Pafuri).
 Distribution: Zimbawbe, Ethiopia, Mozambique, Democratic Republic of the Congo, South Africa.

- Zeria spiralicornis (Purcell, 1903)
 Purcell, 1903b: 304 (from Solpuga); Lawrence, 1955: 194; 1964b: 33; 1967: 83; Harvey, 2003; 323. Type locality: Shilouvane, near Kranskop, KwaZulu-Natal Province.
 Parks/reserves: Kruger National Park (Shingwedzi, Olifants Camp, Skukuza, Malelane Rest Camp, Shalungwa Springs, Satara Rest Camp).
 Distribution: Zimbabwe, South Africa.
- 10. Zeria strepsiceros nocturna (Lawrence, 1965)* Lawrence, 1965: 51 (from Solpuga): 1967: 83; Harvey, 2003: 324. Type locality: Orpen Camp, Kruger National Park. Parks/reserves: Kruger National Park (Orpen Camp, Mtsawu Drift, Doispanne road, Sitlabe Dam, Sabi Poort, Krokodil Bridge). Distribution: South Africa.

vi. Genus Zeriassa Pocock, 1897
 Zeriassa furcicornis Lawrence, 1929* Lawrence, 1929: 169; 1955: 188; 1964b: 31; 1967: 82; Harvey, 2003: 325. Type locality: Kaapmuiden, Mpumalanga Province. Parks/reserves: Kruger National Park (Shingwezdi, Pafuri, Nyandu Bush, Shalungwa Springs, Punda Milia Rest Camp). Distribution: South Africa.
 2. Zeriassa purcelli Hewitt, 1914 Hewitt, 1914: 163; Hewitt, 1919: 52; Lawrence, 1955: 164; Harvey, 2003: 326. Type locality: Newington, Limpopo Province. Parks/reserves: Kruger National Park (Leeupan, Skukuza). Distribution: South Africa.
 Zeriassa transvaalensis Lawrence, 1964* Lawrence, 1964b: 31; 1967: 83; Harvey, 2003: 327. Type locality: Tshokwane tea room, Skukuza, Kruger National Park. Parks/reserves: Kruger National Park (Orpen Camp, Mahlakuza Pan, Malanga, Leeupan, Krokodil Bridge, Malelane Camp, Skukuza Rest Camp). Distribution: South Africa.
 4. Zeriassa tuxeni Lawrence, 1965 Lawrence, 1965: 48; Harvey, 2003: 327. Type locality: Letaba Camp, Kruger National Park. Parks/reserves: Kruger National Park (Letaba Camp). Distribution: South Africa.

Some species are exclusively predators of termites (Cloudsley-Thompson 1977; Dippenaar-Schoeman 1993; Punzo 1998).

The aim of this paper is to provide an updated check list of the known Solifugae species that have so far been recorded from protected areas (national parks, nature reserves and wilderness areas) in South Africa to show the percentage of species presently protected.

Method

Data on the occurrence and distribution of the species were obtained from published literature and material housed in several collections. Species known to be endemic to South Africa are indicated with an asterisk in Tables 1 and 2. Only literature references relative to the areas under discussion were listed; for detailed references on each species see Harvey (2003). The latest nomenclature based

on Harvey (2003) was used to compile the updated check list.

Discussion

The Solifugae presently known from national parks and reserves of South Africa are represented by three families, 11 genera and 46 species (Table 1).

The 46 species represent 30.7 % of the South African fauna that might be presently protected on conserved areas. However, more surveys are needed to increase the sampling effort and improve the knowledge of the distribution of particular species. Also, most of the specimens examined were collected between 30–100 years ago, and therefore, new surveys are needed as part of SANSA to provide more current information on species within protected areas. There is also an urgent need for taxonomic support to improve the reliability of the biological databases on Solifugae as the last taxonomic research on the South African fauna was undertaken by Lawrence in the late 1960s, and by Lamoral (1973).

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